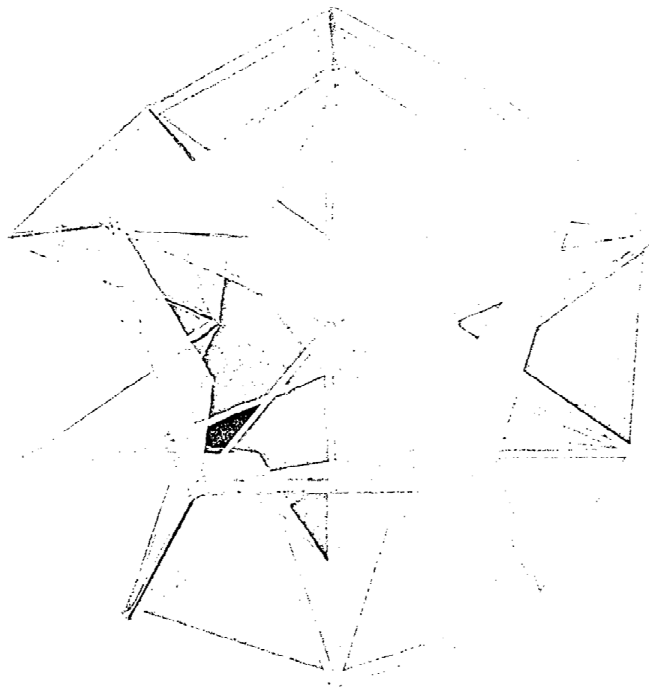


Individual and  
community responses to  
**TRAUMA AND  
DISASTER**



*The structure of human chaos*

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## Long-term sequelae of combat in World War II, Korea and Vietnam: a comparative study

ROBERT ROSENHECK and ALAN FONTANA

### Introduction

In the years since the conclusion of the Vietnam conflict, mental health clinicians and social scientists have vigorously pursued the study of what was initially termed post-Vietnam stress syndrome. Pressed by urgent questions concerning the prevalence and etiology of psychological adjustment problems among Vietnam veterans, great strides have been made in the diagnosis, psychometric assessment, and treatment of the psychological sequelae of combat exposure in Vietnam.

A critical event in the study of war zone stress was the development of the diagnosis of Posttraumatic Stress Disorder (PTSD) for the third edition of the *American Psychiatric Association's Diagnostic and Statistical Manual* (American Psychiatric Association, 1980). Two features of this newly defined diagnostic entity were of particular importance. First, PTSD was conceptualized as a reaction to any type of extreme stress, not just to combat experience. Secondly, the cardinal features of the syndrome were identified in operational terms, encouraging empirical studies of the prevalence and presentation of the disorder in diverse populations.

### *The importance of comparative studies of PTSD*

Although one of the distinctive features of the conceptualization of PTSD was its applicability to many types of traumatic experience, the preponderance of studies of PTSD among war veterans has focused on combat veterans of the Vietnam war. There have been a small number of clinical and empirical studies that have reported the existence of long-term sequelae of combat service among veterans of World War II (Archibald & Tuddenham, 1965; Brill & Beebe, 1955), and veterans of the Korean Conflict (Sutker, Thomason & Allain, 1989). There has been only one study,

conducted on a medical ward in a Department of Veterans Affairs (VA) medical center, which compared the prevalence of combat stress among veterans of different wars (Blake et al., 1990).

In spite of the lack of empirical data, there is considerable speculation about differences in the experiences of veterans of different wars, particularly between veterans of World War II and the Vietnam Conflict. Some have suggested that both the guerilla nature of combat in Vietnam and the public controversy surrounding the war resulted in a degree of social alienation and psychological stress among Vietnam veterans that was relatively uncommon among veterans of World War II (Laufer, Gallops & Frey-Wouters, 1984). It is curious that there has been little discussion of the experiences of veterans of the Korean Conflict, even though, like Vietnam veterans, they fought in a war of containment that was undeclared, lacked sustained popular support, was fought on the Asian mainland, and ended in less than a military victory.

Comparative studies of different subgroups of veterans studied cross-sectionally are critical for an understanding of similarities and differences in the presentation of PTSD among veterans of different wars. While core symptoms may be similar, differences in 1) premilitary psychological and socioeconomic status, 2) combat experience, 3) quality of the postwar 'home-coming', and 4) the broad sociocultural milieu to which they returned are likely to have a significant influence on the nature of the readjustment problems experienced by veterans of different wars. Only through comparative empirical studies will it be possible to understand how the interaction of personal psychology, military experience, and changing societal circumstances shapes the long-term impact of combat.

The aging of World War II and Korean veterans lends a certain urgency to the conduct of cross-sectional comparative studies. In only a few years these veterans will be gone altogether, and comparative studies will be impossible. It seems appropriate and timely to apply knowledge and methods developed in the study of Vietnam veterans to the study of veterans of other wars.

#### *Central issues in the study of PTSD among combat veterans*

Studies conducted on Vietnam era veterans have typically focused on four questions: 1) Does PTSD exist among combat veterans years after the conclusion of their wartime service and, if so, what is its overall prevalence?, 2) How do combat veterans differ from noncombat veterans in their premilitary service characteristics (especially ethnicity, social class, and

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psychiatric illness)?, 3) What is the relative importance of premilitary risk factors versus war zone trauma in the emergence of chronic PTSD?, and 4) What relationships can be discerned between PTSD and other postwar psychiatric illnesses, problems in social adjustment, and patterns of service utilization (especially services from the Department of Veterans Affairs (VA), the federal agency whose primary mission is to heal the wounds of war)?

Studies have demonstrated the existence of postwar psychological problems among Vietnam (Kulka et al., 1988), Korean (Sutker et al., 1989), and World War II veterans (Archibald & Tuddenham, 1965). The National Vietnam Veterans Readjustment Study (NVVRS) convincingly demonstrated a 15.2% prevalence rate for PTSD among Vietnam theater veterans (Kulka et al., 1988). Numerous studies have shown that PTSD is significantly associated with combat exposure. Significant associations have been reported with premilitary psychological and sociodemographic characteristics (Boulanger & Kadushin, 1986; Kulka et al., 1988). Virtually every study addressing the issues has shown that PTSD is associated with serious concomitant psychopathology and social dysfunction (Laufer et al., 1981; Kulka et al., 1988).

#### *Two studies of veterans of World War II, Korea and Vietnam*

In an effort to extend the knowledge gained about Vietnam veterans to veterans of World War II and Korea, this chapter draws on two complementary sources of data: 1) the Third Survey of Veterans (SOV-III) (Department of Veterans Affairs, 1989), a national survey of veterans conducted by the United States Census Bureau in 1986-1987; and 2) a survey of 1900 war zone veterans who were assessed as part of the evaluation of a national VA clinical program in 1989-1990. The special strength of SOV-III is that it represents the total population of US military veterans. Its weakness is that data on premilitary and war zone experience, as well as current clinical status, are limited. In contrast, data from the clinical sample, while far richer in detail, are subject to the selection biases associated with a treatment seeking population.

Conclusions concerning the impact of combat on veterans of the three wars are complicated by the potentially confounding influences of current age and generational membership. Although the attribution of effects to either of these influences is largely a matter of interpretation, age effects such as increasing medical problems or widowhood are primarily biologically determined and could be expected to be essentially the same for all

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generations. In contrast, generational effects are likely to be determined by sociocultural factors. Divorce and drug abuse, for example, are more frequent among veterans who reached adulthood during the 1960s. Although these veterans are younger than their World War II counterparts, it is less their youth than the generation to which they belong that most likely accounts for these effects.

Using these two sources of data, we examine hypotheses concerning who went to war, what happened during their war zone service, and how their war zone experiences affected them after they came home. More specifically, we hypothesized that: 1) higher percentages of minority veterans and veterans of low socioeconomic status would be found among combat veterans than among noncombat veterans; 2) specific war zone experiences and traumas would differ among combat veterans of the three wars; 3) exposure to combat and other war zone stressors would be associated with increased psychiatric and social adjustment problems, and particularly with more severe symptoms of PTSD; 4) PTSD symptoms would be similar among veterans of all three wars; 5) social maladjustment problems would differ among veterans of the three wars, assuming that such problems are shaped as much by postwar sociocultural factors as by the psychological sequelae of combat; and 6) Vietnam veterans, as a result of their alienation from government agencies, would make less use of VA health care services and receive VA disability benefits less often than veterans of other wars.

*The 1987 survey of veterans: methods*

The 1987 Survey of Veterans (SOV-III) was designed by the Veterans Administration and was conducted by the United States Census Bureau to survey a representative national sample of noninstitutionalized veterans. Veterans were selected from citizens participating in the General Purpose Sample of the monthly Current Population Survey of April 1986 to January 1987 (for details of the sampling procedures see Department of Veterans Affairs, 1989). A total of 7058 wartime veterans were interviewed for SOV-III, and their responses were weighted on the basis of age, gender, and ethnicity to yield national population estimates.

*Sociodemographic measures*

Survey data of particular relevance to our study are age, ethnicity, marital status, military service history, highest educational level, current employment, income, and VA disability status. While data on premilitary

socioeconomic status were not collected, educational level at the time of entry into the military was recorded, and will be used as a proxy for premilitary socioeconomic status.

#### *Measures of general health and mental health status*

Measures of current general health status in SOV-III include a five-point self-assessment of overall health status (excellent, very good, good, fair, and poor) and a self-assessment of health related limitations on ability to work.

While there are no measures of specific PTSD symptomatology in SOV-III, each veteran identified, from a list of 66 illnesses, those they had experienced in their lifetime. Three of these categories address lifetime experiences of mental illness: psychiatric problems, alcohol problems, and drug problems. Veterans reporting any one of these problems were considered to have had a mental health problem.

The overall reported prevalence of any mental illness in SOV-III was 4.8% for World War II veterans, 4.4% for Korean Conflict veterans, and 7.9% for Vietnam veterans. In general, these rates appear lower than one might expect and suggest a substantial underreporting of mental illness on a casual health survey of this nature. More precise lifetime rates of mental illness are available from the Epidemiological Catchment Area (ECA) Study, a collaborative research program conducted under the auspices of the NIMH during the early 1980s (Norquist et al., 1990). Although ECA lifetime rates of mental illness are up to 11 times greater than those recorded in SOV-III, there is a high correlation between the prevalence rates for specific psychiatric, alcohol, and drug disorders in the ECA study and the rates found in SOV-III ( $r = .87$ ,  $df = 7$ ,  $p < .01$ ). This substantial correlation suggests that the rates of mental illness reported in SOV-III accurately reflect the *relative* rates of mental illness in the veteran population.

#### *The sample*

Analyses included all male veterans who reported military service during the official wartime eras of World War II (September 16, 1940–July 25, 1947), Korea (June 27, 1950–January 31, 1955), and Vietnam (August 5, 1964–May 7, 1975). Because of our interest in comparing characteristics of veterans from specific wartime eras, veterans who served in more than one era were excluded from the analyses. Data presented pertain to populations of 'single era' veterans: 8 553 416 male World War II era veterans (89% of the total), 3 766 357 male Korean era Veterans (73% of the total), and

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57 674 male Vietnam era veterans (91% of the total). The lower proportion of Korean era veterans reflects the large number excluded because of dual service in World War II.

### *Analyses*

Comparisons are presented between all veterans of each service era, within each service era, and between combat and noncombat veterans. Veterans who reported war zone service but no exposure to combat are classified with noncombat veterans.

For categorical data, standard errors of percentages and of differences between percentages were computed using the formulae presented in the statistical Appendix of SOV-III (Department of Veterans Affairs, 1989). These standard errors were used to evaluate the statistical significance of differences between pairs of percentages, reported as P values in Table 15.1. Differences in means were evaluated for significance by analyses of variance and multiple range tests.

Multivariate analyses of the relationship of combat experience to: 1) lifetime mental health problems, 2) current general health status, 3) divorce or separation, 4) current educational attainment, and 5) current income were performed for veterans of each war, controlling for premilitary service characteristics (ethnicity, premilitary level of education, and year of birth – entered as current age). Multivariate analyses were also performed on the utilization of VA health services by veterans of the three wars, controlling for combat experience, health status, current income, and ethnicity. VA is the federal agency directly responsible for healing 'the wounds of war'. Veterans' use of VA services is assumed by many to reflect their attitudes towards the society that sent them to war. Relationships for dichotomous dependent variables were obtained as adjusted odds ratios from simultaneous logistic regression analyses. Relationships for continuous dependent variables were determined by simultaneous ordinary least squares multiple regression procedures and were obtained as beta (standardized regression) coefficients.

### *The 1987 survey of veterans: results*

#### *Comparison of veterans of three wartime service eras*

Data on age, ethnicity, and premilitary educational status are presented in Table 15.1. As expected, there is a wide discrepancy in mean age between veterans of the three wars. The percentage of minorities in the military has

Table 15.1. Demographic data, premilitary education and war zone service: health status and social adjustment, by combat exposure and military service era (single era veterans only) from the 1987 survey of veterans\*

	World War II		Korea		Vietnam	
	Combat 4434697	Non-combat 4118713	Combat 862901	Non-combat 2903457	Combat 2572085	Non-combat 4585589
Population estimate						
Age (mean)	66.7	66.0 <sup>b</sup>	55.7	55.2 <sup>a</sup>	40.8	39.5 <sup>c</sup>
Race (%)						
White	91.9	86.8 <sup>b</sup>	86.3	88.7	83.2	84.4
Black	4.9	7.4 <sup>a</sup>	9.8	6.5	9.1	8.4
Hispanic	2.7	3.6	3.7	3.4	6.0	5.1
Other	0.5	1.8	0.0	1.4 <sup>b</sup>	1.7	2.0
Education at Service entry (%)						
< High school graduate	48.3	42.1 <sup>a</sup>	50.5	31.0 <sup>c</sup>	20.2	19.2
High school graduate	38.5	40.4	39.1	49.2 <sup>a</sup>	55.7	51.2
Some college	13.3	17.5 <sup>a</sup>	10.4	19.7 <sup>b</sup>	24.0	29.6 <sup>a</sup>
Health status score (mean) (1 = Excellent to 5 = Poor)	2.9	2.8 <sup>b</sup>	2.6	2.3 <sup>a</sup>	2.3	2.1 <sup>c</sup>
Health related work limits (%)	25.6	22.1	11.9	7.1	6.5	2.9 <sup>c</sup>
Lifetime mental health problems (%)						
Psychiatric problem	2.7	1.9	3.1	1.6	5.9	2.8 <sup>a</sup>
Alcohol problem	3.6	2.2 <sup>a</sup>	3.9	1.8	6.2	2.6 <sup>b</sup>
Drug problem	0.0	0.0	0.0	0.9	2.1	1.3
Any mental health problem	5.5	3.9 <sup>a</sup>	7.0	2.8 <sup>a</sup>	12.0	5.6 <sup>c</sup>

<i>Marital status (%)</i>						
Married	81.1	81.9	82.8	86.2 <sup>a</sup>	80.8	77.1
Widowed	8.7	7.0	1.2	1.5	0.6	0.4
Separated/divorced	7.3	7.2	12.8	8.4	13.3	14.8
Never married	2.9	3.9	3.2	3.8	4.9	7.6 <sup>a</sup>
<i>Highest level of education (%)</i>						
< High school graduate	36.4	32.0 <sup>a</sup>	31.6	18.6 <sup>c</sup>	5.0	6.0
High school graduate	35.0	32.6	38.3	37.5	38.7	35.5
Some college	28.6	35.3 <sup>b</sup>	30.1	43.9 <sup>c</sup>	56.4	58.5
<i>Current employment (%)</i>						
Employed	29.7	35.0 <sup>a</sup>	79.3	81.9	88.5	93.2 <sup>a</sup>
Retired/disabled	68.5	62.9 <sup>a</sup>	17.3	14.3	4.6	2.1 <sup>a</sup>
Unemployed/other	2.3	2.6	3.5	3.4	6.9	4.7
<i>Personal income (mean)</i>	\$19749	\$22905 <sup>c</sup>	\$27177	\$31928 <sup>b</sup>	\$34519	\$30617 <sup>c</sup>
<i>Ever used V/A health Services (%)</i>	30.2	21.5 <sup>c</sup>	21.5	18.6	25.8	16.2 <sup>c</sup>
<i>V/A disability (%)</i>	12.1	5.8 <sup>c</sup>	5.6	3.5	9.6	3.2 <sup>c</sup>

*Notes:*

\* Statistical comparison of combat and noncombat veterans by service era.

<sup>a</sup> =  $p < .05$ .

<sup>b</sup> =  $p < .01$ .

<sup>c</sup> =  $p < .001$

Totals do not all add to 100% because of rounding.

increased steadily from one service era to another, as have educational levels at the time of entry into the service, mirroring developments among comparable age and gender cohorts in the general US population (US Bureau of the Census, 1989).

As expected, general health status (Table 15.1) is poorer among older veterans, and disabling health-related problems are more frequent. Mental health problems, in contrast, are significantly more frequent among Vietnam era veterans than among World War II and Korean era veterans. This is consistent with trends among matched age groups in the nonveteran population (Norquist et al., 1990).

Veterans of earlier war eras are also significantly more likely to be widowed, retired or disabled, and to have lower incomes. Vietnam veterans, overall, are more frequently divorced. These relationships follow trends in the general US population (US Bureau of the Census, 1989).

Contrary to our hypothesis that Vietnam veterans have been reluctant to use VA medical facilities, 19.7% of Vietnam era veterans report use of VA health care services, a significantly smaller percentage than for World War II veterans (26.0%) but about equal to the percentage of Korean era veterans (19.3%). The overall equivalence of VA service use among Vietnam and Korean era veterans is especially noteworthy, considering that Korean era veterans are a decade older and report poorer health status than Vietnam era veterans.

As with the use of VA health services, it is notable that the percentage of Vietnam era veterans receiving VA disability payments is greater than that of Korean era veterans, although smaller than the percentage of World War II veterans. These differences are not explained by differences in combat casualty rates (US Bureau of the Census, 1989).

### *Comparison of veterans by combat exposure*

#### *Ethnicity*

Among World War II veterans, those who served in combat are less frequently black or Hispanic than those who did not see combat. Korean veterans show a reversal of this pattern, with a greater percentage of blacks among those who saw combat (Table 15.1). Among Vietnam veterans, in contrast, blacks and Hispanics are only slightly, and insignificantly, more frequently represented among combat veterans than among noncombat veterans. This finding also has been reported by others (Boulanger & Kadushin, 1986).

*Long-term sequelae of war**Premilitary educational levels*

World War II combat veterans were somewhat less well educated at the time of entry into military service than those who did not serve in combat (Table 15.1). However, far greater differences in premilitary educational status exist among Korean veterans. Over half (50.5%) of Korean combat veterans had not completed high school as compared to only 31% of noncombat veterans. Among Vietnam era veterans 4.5% *more* combat veterans than noncombat veterans graduated from high school when they entered the military, while only 5.6% fewer attended college. These data seem to indicate that, contrary to popular belief, ethnicity and class differences between those who were exposed to combat and those who were not, were greatest in the Korean Conflict and smallest in the Vietnam Conflict.

*Health status*

Combat veterans in each era report poorer overall health, more frequent health related work limitations, and more frequent mental health problems than noncombat veterans (Table 15.1). While not offering direct evidence of the presence of PTSD among combat veterans, these data are suggestive of an adverse impact of combat experience on general health and mental health status.

*Divorce*

It has often been suggested that an especially high rate of divorce is characteristic of veterans suffering from PTSD. SOV-III data, however, suggest that the divorce rate is only higher among Korean combat veterans, although with only marginal statistical significance.

*Educational achievement*

Korean combat veterans also stand out when we examine levels of educational attainment. Although combat veterans of all eras are currently somewhat less well educated than those who were not in combat, these differences are greatest among the Korean veterans, largely reflecting differences that existed at the time of service entry.

*Employment*

Both World War II and Vietnam combat veterans, consistent with their poorer health status, are more likely to be retired/disabled than noncombat veterans. In view of the evidence of generally poorer adjustment of Korean combat veterans as compared to their noncombat peers, it is somewhat surprising that there is no significant difference in employment between Korean combat and noncombat veterans. This puzzling finding persists even when other factors (ethnicity, premilitary level of education, and current age) are statistically controlled.

*Income*

World War II and Korean combat veterans have lower incomes than their noncombat counterparts. In contrast, the mean income of Vietnam combat veterans is currently \$3,902 *higher* than that of their noncombat counterparts.

*VA health service use*

Combat veterans of both World War II and Vietnam used VA services significantly more frequently than noncombat veterans (Table 15.1). VA service use is somewhat greater among Korean combat veterans than among noncombat veterans. This difference, however, is not statistically significant, a surprising finding in view of the fact that combat veterans reported significantly poorer health than noncombat veterans.

*VA disability*

Among both World War II and Vietnam veterans, the percentage of combat veterans receiving VA disability payments is more than twice that among noncombat veterans. However, among Korean veterans there is no significant difference in disability certification between combat and noncombat veterans. Furthermore, the percentage of Korean combat veterans receiving VA disability payment is only about half that of World War II and Vietnam combat veterans.

*Multivariate models*

When premilitary service factors (ethnicity, premilitary level of education, and year of birth – entered as current age) were statistically controlled,

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combat remained significantly associated with poor general health, work limitations, and mental health problems among veterans of all three eras. Combat veterans of World War II are 36% more likely to have a mental health problem than noncombat veterans (adjusted odds ratio = 1.36; 95% confidence interval 1.0-1.9). Combat veterans of Korea and Vietnam are more than two and a half times as likely to have a mental health problem as noncombat veterans. Adjusted odds ratio equals 2.6 (1.5-4.7) for Korean combat veterans, and equals 2.6 (1.9-3.5) for Vietnam combat veterans. The upper limit of the 95% confidence interval for World War II veterans is equal to the lower limit of the 95% confidence interval for Vietnam veterans. This suggests that the relationship between combat and mental health problems is significantly stronger among Vietnam veterans than among World War II veterans.

The results of the multivariate analyses were not as consistent for separation/divorce, educational attainment, and income. When premilitary characteristics are statistically controlled, combat is not significantly associated with current educational level for veterans of any era. Korean combat veterans are 1.6 times more likely than noncombat veterans to be divorced (adjusted odds ratio = 1.6; 95% confidence interval 1.2-2.0). Vietnam combat veterans have significantly higher incomes than noncombat veterans ( $\beta = 0.27$ ,  $p < .01$ ).

Multivariate analysis of lifetime VA service use showed that when current health status, income, combat experience, and ethnicity are controlled, Vietnam era veterans were 23% more likely to use VA services than veterans of other eras (adjusted odds ratio = 1.2; 95% confidence interval 1.1-1.4).

*Conclusions*

Our examination of SOV-III results shows that trends in health status and social adjustment among veterans who served in different wartime eras follow age and generational trends in the general population. In addition, SOV-III data point to an increase in health care problems, particularly mental health problems, among combat veterans. Direct information concerning PTSD symptomatology is not available, however, these findings are indicative of an adverse effect of combat experience on general health and general mental health for veterans of all three wars.

Findings regarding the relative pre- and postmilitary circumstances of Korean and Vietnam combat veterans are quite unexpected. More than veterans of any other war, Korean combat veterans compared to noncombat veterans appear to be members of minority ethnic groups, from lower

socioeconomic strata, currently divorced, reluctant to use VA health care services, and possibly were undercompensated for service related disabilities. In contrast, Vietnam combat veterans, compared to noncombat veterans of the same era, show the smallest differences in ethnicity and premilitary educational status, and have higher current incomes. It seems likely that while many Vietnam combat veterans have clearly suffered adverse health consequences of combat, other combat veterans have used their military service as a springboard toward their own socioeconomic improvement. These data indicate that Korean combat veterans, more than Vietnam combat veterans, are the forgotten warriors of today.

#### **The VA clinical sample: methods**

In 1988, the US Congress authorized and funded the establishment by VA of a national network of specialty clinics for the treatment of PTSD, the PTSD Clinical Teams (PCT) program. As part of a multiphase study of the implementation of this program, standardized assessment data were gathered on veterans who were evaluated for treatment during the first year of the program's operation. These teams operated in 24 cities (see acknowledgements) in every region of the country, and in small towns as well as large cities. It must be remembered, however, that veterans seen in this program were a help seeking sample and thus can not be taken as representative of the general population of combat veterans.

#### **Measures**

In addition to basic sociodemographic and military service data, detailed information was gathered on war zone experience, symptoms of PTSD, comorbid disorders, service utilization, and social adjustment.

##### *Combat experience, combat trauma and postwar experience*

A series of true-false items, incorporating the ten-item Revised Combat Scale of Laufer et al. (1981) were used to assess war zone military experiences. To determine the experiences that had been traumatic, or stressful in the postwar period for each veteran, clinicians were asked to make appropriate selections from a 18-item list.

#### **PTSD**

PTSD was assessed using the Structured Clinical Interview for Diagnosis (SCID) (Spitzer & Williams, 1985). Subscores were determined for each of

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the three DSM-III-R PTSD symptom groups (intrusiveness, numbing, and hyperarousal) as well as for war-related guilt. As formulated in DSM-III-R, those veterans receiving criterial ratings for at least one intrusive, three numbing, and two hyperarousal symptoms were diagnosed positive for PTSD.

To assess the course of PTSD, veterans were asked to identify both: 1) the year of onset of PTSD symptoms and; 2) the year that they first became aware that these symptoms were related to their war zone experiences.

### *Additional clinical and social adjustment data*

Clinical diagnoses of other psychiatric disorders were recorded, and a composite index of psychiatric distress was derived from items in the Addiction Severity Index (ASI) (McLellan et al., 1985). Alcohol problems were assessed using the CAGE screening items (Ewing, 1984), and drug problems were determined from a previously validated subgroup of items from the Diagnostic Interview Schedule (Vernez et al., 1988). Information regarding social adjustment, employment, and prior history of mental health service utilization was also obtained.

### *Sample characteristics*

The data presented concern the first 1,900 veterans assessed in the PCT program. As in the analysis of SOV-III data, veterans who served in more than one wartime era were excluded. POWs were also excluded because they were far more frequent among World War II veterans, and we were concerned that their unique experiences might confound comparisons between combat veterans of the three eras. The sample for the present analyses, therefore, consists of 1731 veterans, the vast majority of whom were Vietnam veterans ( $N=1602$ ; 92.6%) followed by World War II veterans ( $N=75$ ; 4.3%) and Korean era veterans ( $N=54$ ; 3.1%).

### *Demographics*

Comparison of the PCT sample with the sample of combat veterans in the general population as surveyed in SOV-III, showed the PCT veterans of each era to be older, more frequently divorced or unmarried, less likely to be employed, and far less well off financially than their counterparts in the general population (data available on request). Among Vietnam era veterans, greater percentages of blacks and Hispanics are present in the PCT sample than in the general population of veterans.

### The VA clinical sample: results

#### *Combat exposure*

When the Revised Combat Scale was categorized into five levels, the majority of Veterans from all three eras had been exposed to the highest level of combat (Table 15.2), with significantly more Vietnam veterans (78%) scoring at that level. (In a nonhelp-seeking community sample, only 27% of Vietnam veterans reported equally high levels of combat exposure (Laufer et al., 1981).

To examine qualitative differences in combat experience, the frequency of positive responses to selected self-report items was compared across wars. Three patterns were discernible. For ten of the items, differences between veterans of the three wars were either not significant or were small ( $p < .05$  for only one comparison) (Table 15.2). These ten items reflect the extremely high frequency, in this help seeking population, of harrowing encounters with danger and death. Only one item (participation in an amphibious invasion) was more frequent among veterans of World War II than among veterans of other wars. Three items were more frequent among veterans of Korea or Vietnam than among World War II veterans: receiving sniper or sapper fire, handling the dead away from the battlefield, and participation in atrocities. Most combat events were experienced with similar, and extremely high frequencies among veterans of all wars. Vietnam and Korean veterans, however, more often reported experiences that would be more common in the context of an unconventional war.

#### *Traumatic experiences*

Data concerning the experiences that clinicians judged to have been traumatic also revealed several different patterns. For seven of the fourteen trauma categories, once again, differences between veterans of different eras were absent or small (Table 15.2). These experiences included grief over the death of a buddy, experienced by over 80% of veterans, and four items involving guilt or feelings of failure.

World War II veterans, more than either Korean or Vietnam veterans, however, were judged to be suffering from sustained fears of being killed, perhaps related to their more prolonged duration of service (33 months, as compared to 19 in the Korean era and 23 during the Vietnam era) (US Bureau of the Census, 1989).

Both Korean and Vietnam veterans were judged to be suffering, more

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frequently than World War II veterans, from guilt over accidentally contributing to the death of another American. Vietnam veterans, more than veterans of the other two wars, were judged to be distressed from both witnessing and participating in atrocities. It is noteworthy, however, that more than one-fifth of Korean veterans were also troubled by witnessing and participating in atrocities.

*Postwar experiences*

Three items concerning feelings of alienation and bitterness towards their own country were also identified most frequently among Vietnam veterans, although they were also identified significantly more frequently among Korean veterans than among World War II veterans (Table 15.2).

Thus, while many of the basic experiences of conventional combat appear to be similar in all three wars, involvement in atrocities or abusive violence are more common among Vietnam veterans and to a lesser extent among Korean veterans than among World War II veterans. Postwar bitterness and alienation follow the same pattern.

*PTSD diagnosis and symptoms*

A total of 73.3% of veterans in the entire sample met DSM-III-R criteria for PTSD on the SCID, with a significantly greater percentage meeting criteria for PTSD among Vietnam veterans (Table 15.3). Vietnam veterans also more often met criteria for numbing, and manifested war related guilt more frequently than veterans of the other wars, although no differences emerged for intrusive symptomatology and hyperarousal. It appears that symptoms of numbing, as well as guilt, may diminish in intensity with the years, while intrusive symptoms and hyperarousal are more persistent.

*Relationship between PTSD symptomatology and war zone stress*

To determine the relationship of PTSD symptomatology to 1) combat exposure, 2) witnessing atrocities, and 3) participating in atrocities, multivariate analyses were conducted for veterans of each war. These analyses showed that PTSD symptomatology is associated, to some degree, with traumatic war zone experiences among veterans of all wars. As noted in the analysis of SOV-III data, these relationships appear weaker among older veterans. More detailed interpretation of these data, however, must await larger numbers of World War II and Korean Conflict veterans.

Table 15.2. *Combat experiences as reported by veterans and clinician assessment of traumatic experiences in PCT program clinical evaluations, by wartime era (single era veterans only)*

	World War II* (percent) N = 75	Korea + (percent) N = 54	Vietnam# (percent) N = 1602
<i>High exposure to combat (combat scale)</i>	68	67	78 <sup>a</sup>
<i>Combat experiences: veteran report</i>			
<i>Insignificant or small interwar differences</i>			
Saw troops killed	95	96	96
Received incoming fire	95	93	98
Unit was in a firefight	76	78	86 <sup>a</sup>
Stationed close to enemy lines	75	80	85 <sup>a</sup>
Unit was ambushed or attacked	80	78	85
Encountered mines or booby traps	65	65	75
Sat with the dying	67	57	65
Veteran was wounded in combat	53 <sup>a</sup>	35	46
Witnessed atrocities	29	23 <sup>a</sup>	38
Member of an artillery unit	31	24	27
<i>World War II &gt; Korea &gt; Vietnam</i>			
Participated in an amphibious invasion	60 <sup>c</sup>	30 <sup>a</sup>	14 <sup>c</sup>
<i>Vietnam &gt; Korea &gt; World War II</i>			
Unit received sniper or sapper fire	80	81 <sup>a</sup>	92 <sup>b</sup>
Handled dead away from the battlefield	37 <sup>b</sup>	56	54 <sup>b</sup>
Participated in atrocities	4 <sup>b</sup>	21 <sup>a</sup>	33 <sup>c</sup>

*Clinician assessment of traumatic experiences**Insignificant or small interwar differences*

Grief/anger death of a buddy

Horror at death &amp; dismemberment

Guilt over surviving the war

Guilt over killing others

Felt inadequate to save the wounded

Horror at the stream of human remains

Guilt over failing at responsibilities

*World War II > Korea = Vietnam*

Terror of being killed

*Vietnam = Korea > World War II*  
Guilt over accidentally contributing to the death of an American*Vietnam > Korea = World War II*

Horror over witnessing atrocities

Guilt over participating in atrocities

*Vietnam > Korea > World War II*

Anger the country did not support their war

Anger at being dehumanized by the military

Anger at lack of public understanding

81	80	81	81
74	80	75	74
60 <sup>a</sup>	51	46	60 <sup>a</sup>
53	49	42	53
36	38	33	36
35	31	30	35
26 <sup>a</sup>	24	15	26 <sup>a</sup>
57 <sup>a</sup>	44	70 <sup>b</sup>	57 <sup>a</sup>
18 <sup>c</sup>	29	6 <sup>c</sup>	18 <sup>c</sup>
56 <sup>c</sup>	24 <sup>c</sup>	25	56 <sup>c</sup>
34 <sup>c</sup>	22 <sup>a</sup>	6	34 <sup>c</sup>
57 <sup>c</sup>	18 <sup>c</sup>	0 <sup>c</sup>	57 <sup>c</sup>
42 <sup>c</sup>	24 <sup>b</sup>	3 <sup>c</sup>	42 <sup>c</sup>
68 <sup>c</sup>	9 <sup>c</sup>	1 <sup>a</sup>	68 <sup>c</sup>

*Notes:*

\* Statistical comparison of World War II and Korean era veterans.

+ Statistical comparison of Korean era and Vietnam era veterans.

# Statistical comparison of Vietnam era and World War II veterans.

<sup>a</sup> =  $p < .05$ .<sup>b</sup> =  $p < .01$ .<sup>c</sup> =  $p < .001$ .

Table 15.3. *Mental health status and service use among PCT veterans by wartime service era (single era veterans only)*

	World War II* (percent) N = 75	Korea + (percent) N = 54	Vietnam# (percent) N = 1602
<i>PTSD (SCID)</i>	55	65	75 <sup>c</sup>
Intrusive symptoms	85	83	87
Numbing symptoms	63	70	82 <sup>c</sup>
Hyperarousal	80	78	89
Guilt (2 of 2 items)	43	46 <sup>b</sup>	62 <sup>b</sup>
<i>Other psychiatric disorders</i>			
Anxiety disorder	19	15	19
Affective disorder	41	37	40
Schizophrenia	1	2	4
Anxiety disorder	19	15	19
Affective disorder	41	37	40
<i>ASI psychiatric scale (mean)</i>	0	1	1 <sup>a</sup>
<i>Suicide attempts</i>			
Lifetime	8 <sup>c</sup>	35	39 <sup>c</sup>
Past 30 days	0	2	6 <sup>c</sup>
<i>Substance abuse disorders</i>			
Alcohol abuse (Cage score = 3)	5	15 <sup>b</sup>	28 <sup>c</sup>
Drug abuse (3 of 3 DIS items)	0	0 <sup>b</sup>	9 <sup>c</sup>
<i>Onset of PTSD symptoms</i>			
Symptom onset during war era	89	83	91
Symptom onset after war era	11	17	9
<i>Delay from onset to recognition</i>			
None	51	55 <sup>b</sup>	36 <sup>b</sup>
1-2 years	21	21 <sup>a</sup>	13 <sup>a</sup>
3-10 years	6	6	24 <sup>c</sup>
> 10 years	23	17 <sup>c</sup>	27
<i>Mental health service utilization</i>			
Specialized PTSD program	11	19 <sup>b</sup>	34 <sup>c</sup>
Psychiatric hospitalization	36	50	50 <sup>a</sup>
Psychiatric outpatient rx.	56	67	70 <sup>a</sup>
Alcohol hospitalization	16	35	35 <sup>c</sup>
Alcoholism outpatient rx.	16	31	36 <sup>c</sup>
Drug abuse hospitalization	0 <sup>a</sup>	4 <sup>c</sup>	18 <sup>c</sup>
Drug abuse outpatient rx.	0 <sup>a</sup>	4 <sup>c</sup>	14 <sup>c</sup>
Any mental health hospitalization	47	65	66 <sup>c</sup>
Any mental health outpatient rx.	63 <sup>a</sup>	78	83 <sup>b</sup>

*Notes:*

\* Statistical comparison of World War II and Korean era veterans.

+ Statistical comparison of Korean era and Vietnam era veterans.

# Statistical comparison of Vietnam era and World War II veterans.

<sup>a</sup> =  $p < .05$ .<sup>b</sup> =  $p < .01$ .<sup>c</sup> =  $p < .001$ .

**Comorbidity**

Psychiatric comorbidity was assessed using a checklist of clinical diagnoses, completed by the clinician at the end of each veteran's evaluation (Table 15.3). Diagnostically, there were no differences among veterans of the three wars in the frequency of nonPTSD anxiety disorders, affective disorders, or schizophrenia. However, Vietnam veterans scored significantly higher than World War II veterans on the ASI psychiatric composite index, a measure of nonspecific psychiatric distress. Of particular note is the dramatic elevation in lifetime and recent suicide attempts among Vietnam compared to World War II veterans. Thus, while prevalence of comorbid psychiatric disorders does not differentiate veterans of the different eras, current psychiatric distress and suicidality do set Vietnam veterans apart from those of World War II.

As in SOV-III, both alcohol and drug abuse were most prevalent among Vietnam veterans, reflecting both their youth and generational affinity. However, a strikingly high percentage of Korean Conflict veterans were also diagnosed with alcohol abuse.

**PTSD: course of illness**

Over 85% of all veterans reported that symptoms of PTSD began during wartime; and, conversely, there were no significant differences between war eras in the percentages who reported delays in symptom onset (Table 15.3). Many more Vietnam veterans, however, identified a delay in *recognition* that their symptoms were related to their combat experience. Over a quarter of all help-seeking Vietnam veterans reported a lapse of over 10 years from symptom onset to the time they first identified their troubles as war related. These data suggest that the national attention focused on the problems of Vietnam veterans since 1980 may have had an important consciousness raising effect.

**Social adjustment**

As one would expect in a psychiatric patient population, the social and vocational status of PCT veterans (Table 15.4) is far below that of combat veterans in the general population (Table 15.1). As in SOV-III, however, clear differences in social adjustment status are apparent among these help seeking veterans of the three wars. Additionally, they seem to be influenced by both age and generational membership. Korean and Vietnam veterans

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 Vietnam#  
 (percent)  
 N = 1602

 75<sup>c</sup>  
 87  
 82<sup>c</sup>  
 89  
 62<sup>b</sup>

 19  
 40  
 4  
 19  
 40
1<sup>a</sup>
 39<sup>c</sup>  
 6<sup>c</sup>

 28<sup>c</sup>  
 9<sup>c</sup>

 91  
 9

 36<sup>b</sup>  
 13<sup>a</sup>  
 24<sup>c</sup>  
 27

 34<sup>c</sup>  
 50<sup>a</sup>  
 70<sup>a</sup>

 35<sup>c</sup>  
 36<sup>c</sup>

 18<sup>c</sup>  
 14<sup>c</sup>

 66<sup>c</sup>  
 83<sup>b</sup>


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in the PCT program, as in SOV-III, are considerably more likely than World War II veterans to be separated or divorced. Related to this is the finding that Vietnam veterans are far more socially isolated than others, with 47% reporting that they spend most of their free time alone, as compared to 35% of Korean veterans, and only 16% of World War II veterans.

Employment and income patterns also appear to be strongly influenced by age, with 73% of World War II veterans and 46% of Korean veterans reporting themselves as retired, while 68% of Vietnam veterans report either full- or part-time employment. Vietnam veterans, however, report far greater job instability than veterans of other wars, with 37.4% having quit or been fired from a job over 10 times in their lives. Both Korean and Vietnam veterans in this clinical sample have been incarcerated more frequently than World War II veterans.

#### ***Mental health service utilization***

Vietnam veterans have used all types of mental health services more frequently than World War II veterans, and they have used PTSD and drug abuse treatment programs more often than Korean veterans (Table 15.3). These differences may well reflect 1) more frequent substance abuse among Vietnam veterans, 2) a reduction of the stigma attached to mental health service utilization in recent decades, 3) the development of specialized services for PTSD by VA during the past 10 years, and 4) the increase in public attention and acceptance of PTSD among Vietnam veterans in recent years.

#### **Conclusions**

The clinical data available from the PCT program support and extend the impressions gleaned from SOV-III. In many ways, war zone experiences and traumas are similar among help-seeking veterans of all three wars. The most notable differences concern the greater frequency of abusive violence reported by both Korean and Vietnam veterans, and the greater frequency of alienation and bitterness towards their own society among Vietnam, and to a lesser extent, Korean veterans.

Symptomatology of PTSD is similar among help-seeking veterans of all three wars. Numbing and guilt, along with general levels of psychiatric distress, appear to diminish with the passage of time. As expected, PTSD symptomatology was found to increase with increased war zone stress for veterans of all three wars.

Table 15.4. *Marital status, employment/income status, and social adjustment of PCT veterans by wartime era (single era veterans only)*

	World War II* (percent) N = 75	Korea + (percent) N = 54	Vietnam# (percent) N = 1602
<i>Marital status</i>			
Married	73	65 <sup>b</sup>	45 <sup>c</sup>
Widowed	7	2	1 <sup>a</sup>
Separated/divorced	15	28 <sup>a</sup>	44 <sup>c</sup>
Never married	5	6	10
<i>How spend free time</i>			
Family	68 <sup>a</sup>	48	37 <sup>c</sup>
Spouse/friends	16	17	15
Alone	16 <sup>a</sup>	35	48 <sup>c</sup>
<i>Employment past 3 years</i>			
Employed	21	37 <sup>c</sup>	69 <sup>c</sup>
Retired/disabled	73 <sup>b</sup>	46 <sup>c</sup>	14 <sup>c</sup>
Unemployed/other	5 <sup>a</sup>	17	17 <sup>c</sup>
<i>Personal income (mean)</i>	\$12 600	\$11 068	\$13 217
<i>Quit or fired from job</i>			
Never	36	26 <sup>b</sup>	10 <sup>c</sup>
1-10 times	52	43	52
> 10 times	12 <sup>b</sup>	31	37 <sup>c</sup>
<i>Ever incarcerated</i>			
Never	77 <sup>c</sup>	46	40 <sup>c</sup>
Less than 2 weeks	20	33	32 <sup>a</sup>
Two weeks or more	3 <sup>b</sup>	20	28 <sup>c</sup>

*Notes:*

\* Statistical comparison of World War II and Korean era veterans.

+ Statistical comparison of Korean era and Vietnam era veterans.

# Statistical comparison of Vietnam era and World War II veterans.

<sup>a</sup> =  $p < .05$ .<sup>b</sup> =  $p < .01$ .<sup>c</sup> =  $p < .001$ .

Echoing findings from SOV-III, Vietnam veterans are more likely to have used mental health services than veterans of World War II, to have made suicide attempts, to have been involved in antisocial activities, and to be more frequently divorced, socially isolated, and vocationally unstable. Korean veterans fall in between Vietnam and World War II veterans on these measures, but it is not clear whether this reflects their intermediate age or the fact that the war in which they fought was in some ways like World War II, and in other ways like Vietnam.

### Discussion

In this chapter, we have compared premilitary characteristics, war zone stressors, and postwar adjustment of veterans who served in World War II, Korea, and Vietnam. Using two complementary sources of data, a national community sample and a VA clinical sample, we identified characteristics of combat service and its aftermath that are similar among veterans of the three wars as well as those that are dissimilar. The principal findings of our examination of the Survey of Veterans and the VA clinical survey are listed in Table 15.5.

In our introduction, we presented six hypotheses which we shall now evaluate on the basis of these findings.

*Hypothesis 1: Higher percentages of minority veterans and veterans of low socioeconomic status are found among combat veterans than among non-combat veterans.*

Contrary to our original hypothesis, our data show that minorities and veterans with low premilitary educational attainment were not consistently overrepresented among combat veterans of the three eras. Racial and educational differences were modest during World War II, noteworthy during the Korean war, and negligible during the Vietnam War, a finding also reported by others (Martin, 1986). The Vietnam Conflict, in particular, was fought during a period of high public sensitivity to issues of social equality. The armed forces, early in the war, made a deliberate effort to balance exposure to combat danger among ethnic groups (Baskir & Strauss, 1978).

*Hypothesis 2: Specific war zone experiences and traumas differ among combat veterans of the three wars.*

By the available measures, veterans of the three wars were exposed to similar levels and types of conventional combat stress. Participation in abusive violence, however, was considerably more frequent among Vietnam and Korean veterans than among World War II veterans. These findings were based on data from a help seeking VA sample in which overall exposure to combat was especially high. We believe, however, these data accurately reflect the unconventional nature of these two wars, in which soldiers and civilians could often not be easily distinguished.

In addition to these differences in war zone stress, both Korean and

Table 15.5. Summary of findings

	WW II	Korea	Vietnam
<i>Findings from the 1987 survey of veterans (National survey: representative of all US veterans)</i>			
1. Is combat exposure associated with more frequent/more severe health and/or mental health problems?	Yes	Yes	Yes
2. Were socio-economic/ethnic differences apparent between combat veterans and noncombat veterans at time of service entry?	Yes	Yes	No
3. Is combat exposure associated with current health-related vocational dysfunction?	Yes	Yes	Yes
4. Are combat veterans more likely than others to use VA health-care services?	Yes	No	Yes
<i>Findings from the PTSD clinical teams evaluation (Survey of help-seeking VA clinic users)</i>			
1. Is there evidence, specifically, of current posttraumatic stress disorder among veterans exposed to combat and/or other war zone stressors?	Yes	Yes	Yes
2. Is the degree or type of war-zone exposure related to severity of current PTSD symptoms?	Yes	Yes	Yes
3. Is the presence of PTSD associated with evidence of other psychiatric, social or vocational dysfunction?	Yes	Yes	Yes
4. Are there major differences in combat exposure and clinical presentation from veterans of different wars?	Yes	Yes	Yes

Vietnam veterans, in contrast to World War II veterans, report bitterness about feeling exploited by the military and unsupported by the country on their return home. This combination of participation in atrocities overseas and rejection at home formed a disturbingly negative constellation for a sizable group of Korean and Vietnam veterans.

*Hypothesis 3: Exposure to combat and other war zone stressors is associated with increased psychiatric and social adjustment problems, and particularly with more severe symptoms of PTSD.*

In both the national survey and the VA clinical sample, the data we have reviewed indicate that exposure to war zone stress is associated with both physical and mental health problems. In and of themselves, each of these sources of data has notable limitations. In SOV-III, only general health problems are identified and their measurement is unidimensional. Although more elaborate and specific data on PTSD are available from the help-seeking PCT sample, they have limited generalizability. When considered together, however, the data lead us to believe that had more elaborate information been gathered in the national survey, the relationship of war zone stress and PTSD would have been clearly demonstrated in the general population.

*Hypothesis 4: PTSD symptoms are similar among veterans of all three wars.*

Although detailed data on symptoms of PTSD are only available for the clinical sample, they demonstrate that full-blown PTSD exists among some veterans of all three wars. The exceptionally high proportion of veterans with PTSD is due to the fact that these diagnostic data were collected from a clinical sample. The higher prevalence of PTSD among Vietnam veterans, relative to veterans of others wars, probably does reflect epidemiologic trends in the general veteran population. Two explanations for these trends are plausible. First, symptoms may attenuate with the passage of time or with ageing. World War II and Korean veterans may, in fact, experience less numbing 40 years after combat than Vietnam veterans do 20 years after combat. Moreover, older people may be less likely than others to report psychological symptoms as something out of the ordinary.

Secondly, some psychiatric epidemiologists believe that there has been a real increase in the prevalence of psychiatric disorder among more recent generations (Robins, Locke & Regier, 1991). While the explanation for this

*Long-term sequelae of war*

increase is unclear, increases in both substance abuse and family instability have played contributing roles. Regardless of the explanation, this trend is likely to have influenced the prevalence of PTSD among veterans of different war eras in the same way as it may have affected the prevalence of psychiatric disorder among other segments of the population. An explanation that does not seem plausible, however, is that differences in the prevalence of PTSD are due to differences in exposure to war zone stress.

*Hypothesis 5: Social maladjustment problems differ among veterans of the three wars since these problems are shaped as much by postwar sociocultural factors as by the psychological sequelae of combat.*

In contrast to the relative similarity of PTSD symptomatology among veterans of the three wars, substantial differences exist in social adjustment (e.g. marital status, vocational performance, and involvement with the criminal justice system). The typical clinical image of the combat veteran suffering from PTSD is of a divorced, vocationally unstable, substance abusing Vietnam veteran. As our review demonstrates, however, this contemporary stereotype of the traumatized veteran has less to do with specific problems associated with combat related PTSD than it does with the adaptive style of socially marginal men of the 1980s. The vast majority of World War II veterans with PTSD, for example, are married. These men, while deeply troubled and highly symptomatic, were members of a generation in which divorce was less acceptable and families more often stayed together through adversity.

In the VA sample, PTSD among Vietnam combat veterans has been significantly compounded by social marginality. The exceptionally high rate of social dysfunction reported in this group, in all probability, should be understood as reflecting selection biases that are inherent in surveys of VA clinical populations. In the VA, specific priority is given to serving those who are disabled and impoverished. As a result, the observed differences in social adjustment between veterans of different eras may not exist among those of higher socioeconomic status.

*Hypothesis 6: Vietnam veterans, as a result of their alienation from government agencies, make less use of VA health care services and less frequently receive VA disability benefits than veterans of other wars.*

In view of the evidence of adverse consequences of war zone stress, utilization of VA health services, i.e. services specifically offered to combat

veterans by the federal government, is of particular importance. Surprisingly, Vietnam veterans have used VA health services more often than veterans of any other era. Korean veterans have used such services less often (after controlling for health status). Thus, in spite of evidence that many Vietnam veterans harbor bitter feelings towards the government and the VA, Vietnam era veterans as a group have not shown reluctance to use VA health care services. The public attention that was focused on the adjustment problems of Vietnam veterans during the 1980s may have led many of them to recognize the impact of the war on their lives and to seek assistance from the VA.

In contrast to Vietnam veterans, Korean veterans are less likely to have used VA health services or to be receiving VA disability payments. This relative underuse of VA services and benefits by veterans of the Korean Conflict is of particular interest. In contrast to the total victory achieved in World War II, the Korean Conflict ended in a negotiated stalemate (Stokesbury, 1988). There were no victory parades for the veterans who fought our first war of containment and, eight years after the Vietnam memorial was dedicated, there was still no national memorial to the 55000 veterans who died in Korea. The abuse and neglect that Vietnam veterans were subject to on their return from Southeast Asia has been acknowledged and publicly rebuked. In contrast, few even remember the public controversies that surrounded Korean veterans after their return. In the mid-1950s, stimulated by reports that some Korean POWs had 'converted' to Communism (discredited by subsequent research), the conduct and valor of Korean veterans was publicly questioned. Their presumed poor performance in the war was touted as a harbinger of the deterioration of the American spirit (Severo & Milford, 1989). Vietnam veterans, who came of age during the 'activist' 1960s, were able to rally public attention and concern for their problems in the 1980s. In contrast, Korean veterans were part of a more politically passive generation that did not galvanize public interest or support on their behalf. Recent plans for construction of a national memorial to Korean veterans may signal a belated change in this situation.

### Conclusions

This chapter has presented evidence of significant long-term consequences of combat experience on both the general health and the mental health of veterans of three wars, thus extending well-established findings from studies of Vietnam veterans to veterans of other American wars. Of perhaps greater importance is the observation that, while war zone experiences are